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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/088,694	06/28/2002	Toshihiro Hayata	017446-0325	8920
22428	7590	12/19/2005	EXAMINER	
FOLEY AND LARDNER LLP			MEEK, JACOB M	
SUITE 500			ART UNIT	
3000 K STREET NW			PAPER NUMBER	
WASHINGTON, DC 20007			2637	

DATE MAILED: 12/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/088,694

Applicant(s)

HAYATA, TOSHIHIRO

Examiner

Jacob Meek

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3 - 7, 9 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 8 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 June 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/02, 1/03, 4/04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 3 is objected to because of the following informalities: Claim recites limitation "a signal processing section which combines the combined signal." It is unclear what combining the combined signal entails. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 10 recites the limitation "said control section" in preamble. There is insufficient antecedent basis for this limitation in the claim. There are other instances of "said" in claim 10 which also appear to lack antecedent basis in claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sutton (US-5,644,591) in view of Popovic et al (US-6,370,397).

With regard to claim 1, Sutton discloses a search method in CDMA mobile communication characterized in that cell searcher which has a wide search range and a

narrow search range for synchronous acquisition (see column 2, lines 28 – 41). Sutton is silent with respect to details of searcher configuration. Popovic discloses a system comprising multiple searchers (see figure 6, 64 and column 7, lines 27 – 37 where this is interpreted as equivalent functionality), and also discloses the ability to adjust timing windows (see column 7, lines 47 – 57). It would have been obvious to one of ordinary skill in the art at the time of invention to provide a multipath path searcher with time adjustment to improve system performance in a mobile environment ('397, column 1, line 41 – column 2, line 9).

With regard to claim 2, Sutton is silent with respect to details of searcher configuration. Popovic discloses a search method in a CDMA communications system characterized in that delay spread searcher is assigned to each readable multipath (delay spread) (see column 7, lines 41 – 47). It would have been obvious to one of ordinary skill in the art at the time of invention to provide a multipath path searcher with time adjustment to improve system performance in a mobile environment ('397, column 1, line 41 – column 2, line 9).

With regard to claim 8, Sutton in view of Popovic discloses an apparatus implementing the method of claim 1, and therefore obvious given the aforementioned rejection of claim 1.

Allowable Subject Matter

4. Claims 3 – 7, and 9 are allowed.
5. Claim 10 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.
6. The following is a statement of reasons for the indication of allowable subject matter: Applicant's control section requires inputs as follows: energy input from finger processors, delay profile from searcher section, current reception quality from signal processor downstream from RAKE combiner, and quality of service required for user as

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stored as a system parameter. Applicant's control processes this information to configure searchers in wide and/or narrow modes of operation on basis of inputs. Popovic ('397) shows a timing control unit, but does not disclose an input from RAKE demodulator as required by applicant, or a downstream signal processor providing an input to timing control unit. Takagi et al (US-6,188,682) discloses a downstream processor from RAKE demodulator but does not show a feedback path to search controller (figure 2), and does not disclose operation as claimed by applicant. Shou et al (US-5,910,948) discloses aspects of applicant's invention but lacks downstream processor from RAKE demodulator and does not clearly show a control section. Cox et al (US-6,693,953) discloses a wireless receiver with a signal processing unit with similar functionality to applicant's invention, but does not disclose control of cell searcher with multiple modes of operation.

Other Cited Prior Art

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Cox et al (US-6,731,622) discloses a method and apparatus for communication reception with a controller of similar functionality.

Frank et al (US-6,731,622) discloses a method and apparatus for CDMA multipath searching.

Takagi et al (US-6,188,682) discloses a method and apparatus for CDMA multipath searching.

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Shou et al (US-5,910,948) discloses a method and apparatus for CDMA multipath searching.

Kaku (US-5,812,593) discloses a method and apparatus for CDMA multipath searching.

Kostic et al (US-5,648,983) discloses a method and apparatus for CDMA multipath searching.

Sutton (WO 96/04716) discloses a method and apparatus for CDMA multipath searching.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacob Meek whose telephone number is (571)272-3013. The examiner can normally be reached on 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571)272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMM
11/29/05

TEMESGHEN GHEBREHINSAE
PRIMARY EXAMINER

12/8/05
ore